

**PREVALENCE AND ANTIMICROBIAL  
SUSCEPTIBILITY TESTING OF *Vibrio parahaemolyticus*  
ISOLATED FROM FRESH WATER AND FRESH WATER  
FISH IN NEGERI SEMBILAN**

**SITI FARANABILA BT MOHAMMAD YAACOB**

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This final year project report entitled “Prevalence and Antimicrobial Testing of *Vibrio parahaemolyticus* Isolated from Fresh Water and Fresh Water Fish In Negeri Sembilan” was submitted by Siti Faranabila Bt Mohammad Yaacob, in partial fulfilment of the requirement for the Degree of Bachelor of Sciences (Hons.) Biology, in the Faculty of Applied Science, and was approved by

---

Dr. Noorlis Binti Ahmad  
Supervisor  
B.Sc. (Hons.) Biology  
Faculty of Applied Sciences  
Universiti Teknologi MARA  
72000 Kuala Pilah  
Negeri Sembilan

---

Ilyanie Hj Yaacob  
Project Coordinator  
B.Sc. (Hons.) Biology  
Faculty of Applied Sciences  
Universiti Teknologi MARA  
72000 Kuala Pilah  
Negeri Sembilan

---

Dr. Nor'Aisyah Binti Abu Shah  
Head of School of Biology  
Faculty of Applied Sciences  
Universiti Teknologi MARA  
Beting (Parit Tinggi)  
72000 Kuala Pilah  
Negeri Sembilan

Date:

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## ABSTRACT

### **PREVALENCE AND ANTIMICROBIAL SUSCEPTIBILITY TESTING OF *Vibrio parahaemolyticus* ISOLATED FROM FRESH WATER AND FRESH WATER FISH IN NEGERI SEMBILAN**

*Vibrio parahaemolyticus* is a Gram negative bacteria that can cause a systemic infection in fish called Vibriosis and also as a main foodborne disease in seafood that easily deteriorates in quality, colors and flavors. A total of 36 samples were collected from *Oreochromis* sp. (Red Tilapia) and fresh water samples in Negeri Sembilan. The sampling was done on the gills, intestinal tracts, flesh and also the fresh water samples. In this study, *Vibrio parahaemolyticus* were identified by morphological testing and the growth of green centered colonies on the Thiosulfate Citrate Bile Sucrose (TCBS) agar. These samples were analyzed using Most Probable Number (MPN) method. The prevalence of *Vibrio parahaemolyticus* was found to be 100% in intestinal tracts followed by 88% prevalence in gills and only 44% found in the flesh part of fish samples. However, the presence *Vibrio parahemolyticus* was at 56%. The density of *Vibrio parahemolyticus* in the whole samples was ranged from  $7.5 \times 10^3$  to  $2.4 \times 10^7$  MPN/g. Almost all strain shows a multiple resistance towards all four antibiotics tested with a Multiple Antibiotic Resistant (MAR) index ranging from 0.5 to 0.8 respectively. This results however will indicate that another potential source of food safety issues to consumers.